

ADMINISTRATIVE REPORT TO THE CIVIC OPERATIONS COMMITTEE

ON

COMMUNITY WIDE CURBSIDE RESIDENTIAL ORGANIC WASTE COLLECTION PROGRAM

PURPOSE

The purpose of this report is to seek the Civic Operations Committee's direction on the design of a community-wide residential organic waste collection program, specifically as it relates to shifting to an alternating, biweekly collection schedule for garbage and recycling, and the option to opt out of organics collection for residents who backyard compost or otherwise divert organics from landfill.

COUNCIL STRATEGIC PLAN

This report supports Council's strategic priorities and areas of focus regarding:

- **Governance and Accountability**
 - Asset Management: We proactively plan for the repair and replacement of our infrastructure.
 - Community Engagement: We are committed to engaging and connecting with Kamloops residents and stakeholders.
 - External Relationships: We understand the importance of maintaining and improving key relationships.
 - Fiscal Responsibility: We are fiscally responsible and accountable.
- **Vibrant Economy**
 - Business Health: We cultivate a positive business environment and maintain a framework that facilitates jobs, economic sustainability, and growth.
 - Economic Strength: We support initiatives that increase our competitive advantage, cultivate growth, and support our residents.
 - Partnerships: We continue to nurture partnerships with key agencies and organizations.
- **Environmental Leadership**
 - Climate Action: We enhance the City's resiliency and capacity for mitigating and adapting to the impacts of climate change.
 - Sustainability: We implement strategies that reduce our impact on the environment.

SUMMARY

In December 2020, Council authorized allocating funds from the Solid Waste Reserve for staff to apply for grant funding from the Green Municipal Fund, which is administered by the Federation of Canadian Municipalities, for a feasibility study and pilot program related to curbside residential organic waste collection. Council also authorized allocating funds from the reserve to apply for the CleanBC Organics Infrastructure and Collection Program grant, which could be applied to capital costs associated with a community-wide organics collection program.

The City was awarded \$54,900 (45% of project budget) from the Green Municipal Fund for a feasibility study, \$282,500 (approximately 50% of eligible project costs) for a pilot program, and \$1,788,233 (67% of eligible project costs) from the CleanBC Organics Infrastructure and Collection Program for community-wide implementation. Administration is awaiting a decision on a Green Municipal Fund pilot program grant application.

Administration updated the Civic Operations Committee in June 2021 with the results of the feasibility study, which included key findings from public consultation activities and a composition audit of garbage collection routes. Administration also updated the committee with information regarding a pilot program that would begin in September 2021 and include approximately 2,500 homes across five neighbourhoods.

In December 2021, Administration provided the committee with an update on the pilot program funding and findings, including a summary of the engagement activities with pilot participants, performance measures for waste diversion, participation, and excess garbage and recycling monitoring.

Due to potential delays caused by ongoing supply chain disruptions and shortages that are impacting operations as well as the positive findings from the first 6 months of the 12-month pilot program, Administration will be seeking Council's authorization to approve a community-wide curbside residential organic waste collection program prior to completion of the pilot program.

Administration will be recommending that Council authorize automated collection services for the removal of organic waste from all residential properties on the City's automated collection service using 120 L carts collected weekly and changing from weekly to alternating, biweekly collection for garbage and recyclables.

To support meeting program objectives for waste diversion, organic waste capture, greenhouse gas (GHG) emission reductions, and extending the life of the Mission Flats Landfill, Administration will also be recommending an increased rate for larger-sized garbage carts, and penalties for failure to properly separate or dispose organics.

RECOMMENDATION FROM THE COMMITTEE TO COUNCIL:

That the Civic Operations Committee recommend that Council authorize:

- a) Solid Waste and Recyclables Amendment Bylaw No. 40-68, 2022
(Attachment "C"), to be introduced and read a first, second, and third time**
- b) Municipal Ticket Information Amendment Bylaw No. 43-17, 2022
(Attachment "D"), to be introduced and read a first, second, and third time**
- c) subject to adoption of Bylaw No. 40-68:**
 - i) \$1,200,400 from the Solid Waste Reserve for additional capital costs
including \$120,000 for City-provided kitchen bin liners for
community-wide implementation**
 - ii) the addition of four FTEs to support administration and operations**

d) The Corporate Services Director to update the 2022-2026 Financial Plan accordingly

SUPPORTING COUNCIL AND CORPORATE DIRECTION

The recommendations in this report are supported by the following plans and corporate directions:

- KAMPLAN: City of Kamloops Official Community Plan's goal to reduce solid waste disposal by adopting a zero-waste philosophy and implementing diversion programs as follows:
 - support policies and initiatives for management of recyclable and compostable materials and garbage in alignment with the Thompson-Nicola Regional District (TNRD) Solid Waste Management Plan
 - emphasize the "4 Rs" (reduce, reuse, recycle, and rethink) of waste management through education and awareness
 - leadership in recycling, composting, and waste management by implementing the City's Zero Waste Program
 - extend the life of the Mission Flats Landfill to 2090
- TNRD Solid Waste Management Plan goal to reduce annual per capita waste disposal rate from 614 kg per person to 560 kg per person by 2023 and 500 kg per person by 2028
- Community Climate Action Plan Big Move 5 to reduce waste sent to landfill by 50% by 2028 and by 90% by 2050, including goals to:
 - reduce and capture all kitchen and yard waste for beneficial end use
 - reduce waste and prioritize diversion of methane-generating materials (i.e. cardboard, paper, yard, and wood waste) from entering the landfill
 - reduce the use of non-renewable resources, promote materials reuse, and support regenerative business models
- Council authorization to allocate funding for grant applications in support of a residential organic waste collection program in December 2021

DISCUSSION

Administration began planning for a curbside residential organic waste collection program in March 2020. The approach to the program consisted of three phases:

- Phase 1 - Feasibility Study
- Phase 2 - Pilot Study
- Phase 3 - Community-Wide Implementation

The plan was presented at the November 24, 2020, Regular Council Meeting. In December 2020, Council authorized allocation of funds from the Solid Waste Reserve for staff to apply for grants for all three phases of the program.

Phase 1 - Feasibility Study

The City was awarded a grant from the Green Municipal Fund for a feasibility study, which was completed in June 2021. Phase 1 (feasibility study) included extensive research into organic

waste collection programs, planning, and information gathering in the form of public consultation and audits for garbage collection routes. Public consultation showed that 79% of residents support an organic waste collection program, and audits of garbage collection routes showed that 42% of residential garbage can be diverted from City landfills through organic waste collection.

Phase 2 - Pilot Program

In June 2021, Administration provided an update to the Civic Operations Committee relaying the results of the feasibility study and plans to launch a pilot program (Phase 2) in September 2021. The pilot program would test organic waste collection in each of the City's five collection zones using a model that is common in other jurisdictions—weekly organic waste collection with alternating biweekly garbage and recycling collection. A top concern raised by residents during public consultation in Phase 1 was around costs. This model is one of the lowest-cost options to implement organic waste collection.

Five existing collection routes were selected for the pilot program (one route in each of the City's five collection zones) by applying a methodology to the public survey results that identified routes expected to yield high- and low-participation rates. Households on pilot routes were notified through letters, notices, and direct engagement in the two months leading up to the pilot. Carts, kitchen bins, and information packages were delivered to households two weeks prior to the launch date.

The City was awarded a grant from the Green Municipal Fund for the pilot program, which was launched in September 2021. The two main activities for the pilot are participant engagement and performance monitoring. Participant engagement includes several communication tools, including surveys designed to measure changes in attitudes and behaviours related to organic waste management because of the pilot program and to test the effectiveness of communication tools and strategies.

Pilot Program Engagement

Engagement with pilot participants has been a key activity during the pilot program. The main elements of engagement have been through newsletters, surveys, the City website, program guides and direct communication. Two surveys with participants have been performed to date, with a final survey planned at the end of the pilot.

The table below shows highlights of the first two surveys, including number of responses, level of support for the organics program, the number of backyard composters and specifically their level of support for organic waste collection, how much organic waste is being diverted from landfill, and the level of concern for and impact of biweekly garbage and recycling collection. A survey summary report is included in Attachment "A".

Survey 1 (Sep–Oct 2021)	Survey 2 (Feb–Mar 2022)
535 Responses (24% response rate)	733 Responses (33% response rate)

Survey 1 (Sep–Oct 2021)	Survey 2 (Feb–Mar 2022)
79% Support 13% Neutral 8% Do not support	77% Support 12% Neutral 11% Do not support
39% Home/backyard composters 73% of backyard composters support organic waste collection	40% Home/backyard composters 72% of backyard composters support organic waste collection
n/a	88% have used the cart at least once
Food waste diverted (prior to pilot) 36% None 35% Some 24% Most 6% All	Food waste diverted (since pilot) 7% None 19% Some 34% Most 41% All
Yard waste diverted (prior to pilot) 7% None 17% Some 32% Most 44% All	Yard waste diverted (since pilot) 14% None 33% Some 24% Most 29% All
Soiled paper diverted (prior to pilot) 61% None 25% Some 9% Most 5% All	Soiled paper diverted (since pilot) 10% None 26% Some 42% Most 21% All
Level of concern for biweekly garbage collection 21% Very concerned 23% Somewhat concerned 55% Not concerned 2% Not sure	Level of impact of biweekly garbage collection 23% Significant impact 35% Moderate impact 42% Insignificant or no impact
Level of concern for biweekly recycling collection 24% Very concerned 26% Somewhat concerned 49% Not concerned 1% Not sure	Level of impact of biweekly recycling collection 27% Significant impact 34% Moderate impact 38% Insignificant or no impact

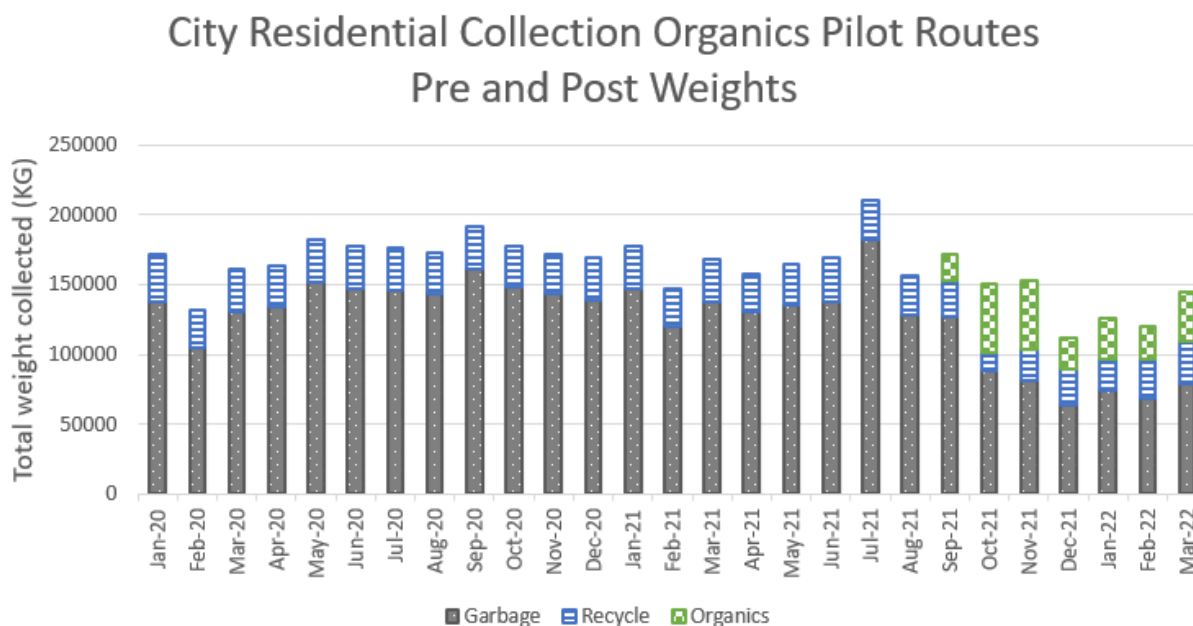
Pilot Program Performance

Several metrics are used to evaluate the performance of the pilot program. Participation and capture rates are measured on a periodic basis and are shown in the table below. Diversion rates (from collection and landfill), GHG emission reductions, landfill life expectancy, and deferred capital costs are measured on an annual basis; however, for the purpose of this report, estimates are shown using adjusted data.

Performance Metric	Description	Results
Participation Rate	The proportion of residents setting out organics cart each week measured by number of organics carts at curb ÷ number of properties.	Organics: 39%
Capture Rate	The proportion of organic waste diverted from garbage measured as total weight of organic waste in organics cart ÷ (the total weight of organic waste in garbage + organics diverted).	December audit: 53%
Diversion Rate - Landfill	The proportion by mass of all waste diverted from disposal to the total mass of all waste material generated.	<i>Reported annually once a full cycle of data has been captured</i>
Diversion Rate - Residential Collection	The proportion by mass of all waste diverted from residential collection to the total mass of all waste material collected.	<i>Reported annually once a full cycle of data has been captured</i>
GHG Emission Reductions (tCO ₂ e)	The net change in GHG emissions measured by GHG avoided from diverting organics from landfill plus GHG emissions from transportation to a processing facility.	<i>Reported annually once a full cycle of data has been captured</i>
Landfill Life Expectancy	Number of years of landfill airspace saved because of diverting organic waste from landfill.	3 years
Value of Landfill Airspace Saved Annually	Estimated value of landfill airspace saved minus the operating cost to fill that airspace. This surplus is transferred to the Solid Waste Reserve, which funds landfill capital projects (e.g. expansion, closure and post closure activities, landfill gas management).	\$420,000

In addition to performance metrics, staff also track total organic waste diverted through the program and reduction in garbage collection on the pilot routes. The amount of waste collected varies seasonally. The following chart shows residential collection from the pilot routes since January 2020.

Prior to the pilot program, the average diversion from residential collection along pilot routes was 18%. Over the period of October 2021–March 2022, the average diversion rate on pilot routes increased to 43%. While the data from the pilot is limited to a shorter period, the data is showing a significant reduction in total material collected as well as total garbage collected.



Pilot Program Audit

As part of the evaluation of the pilot program, Administration completed a waste audit in December 2021 where samples of garbage and organics were collected from households on pilot routes as well as samples of garbage from households on control routes (neighbourhoods adjacent to the pilot routes).

The audit measured the amount and composition of garbage and organics on the pilot routes as well as the amount and composition of garbage on the control routes. The following are some highlights from the December audit:

- The pilot routes set out 24% less total waste (garbage + organics) and 74% less garbage than the control routes (garbage).
- The average weight per household on the pilot routes was 11.9 kg per household/week (3.4 kg organics and 8.6 kg garbage), while the average weight per household on the control routes as 14.8 kg per household/week (garbage only).
- The amount of compostable material in organics carts on pilot routes was 98.4%.
- The amount of compostable material in garbage carts on pilot routes was 36.0%, which consisted of:
 - 27.3% food waste
 - 4.9% compostable and food soiled paper
 - 2.9% yard waste
 - 0.6% other compostable organics (wood, textiles)
- The amount of compostable material in garbage carts on control routes was 50.0%.
- Pilot routes were diverting 16.0% of total waste (not accounting for recyclables).
- Contamination of organics was 1.6%.

The complete December 2021 audit report is included in Attachment "B". Administration will be conducting a second waste audit in second quarter 2022.

Lessons Learned

The pilot has been very informative with many takeaways and lessons to build a successful community-wide program. One of the key learnings from the pilot is around bin liners. During the pilot, participants are only allowed to use paper bin liners as compostable plastic bag bin liners are not accepted by the City's current processing contractor. Administration recognizes that the paper bin liners are significantly higher cost compared to compostable plastic bin liners and will work with prospective organics processing facilities to include compostable plastic liners as part of a future community-wide organics collection program.

Another key lesson from the pilot was the impact to residents transitioning from weekly to alternating biweekly garbage and recycling collection. Despite a robust communication plan to inform pilot participants of the coming changes to collection, Administration made a quick decision to collect all three commodities on a weekly basis for the first two weeks of the pilot in order to allow residents who were unaware of the changes to adjust to the new schedule. Upon full implementation, Administration will need to be prepared for an adjustment period to ensure broad-scale awareness of the changes during the first few weeks of implementation.

Fleet Impacts

Administration is seeking approval to add three more fully automated trucks to the sanitation fleet with implementation of the organics program. The need for more trucks is driven by the following factors:

- Growth - curbside households grow by approximately 1% per year with an annual increase of 500 carts collected every week. There is a current need to increase the number of collection routes in each of the five collection zones based on growth alone.
- Commercial waste - agreements with Recycle BC and Clean BC stipulate that residential and commercial waste cannot be mixed. Historically, the City has provided waste collection services to the commercial sector on residential routes; however, these new agreements that provide financial benefit to the City require separate routes for commercial premises.

There is also a need for two additional fleet units to support the administration and education of the solid waste collection system. These units will be operated by the Solid Waste Reduction Coordinator and the Solid Waste Services Analysts.

Timing Considerations

Administration is seeking approval for a community-wide program prior to completing the pilot program. Recent and ongoing challenges with supply chains disruptions have had a significant impact on solid waste collection services, most notably in the ability to obtain new solid waste carts and fleet units. To meet the proposed timeline to introduce community-wide collection in July 2023, Administration will need to engage with suppliers and contractors as far in advance as possible.

Another reason for seeking early approval for the program is to provide an opportunity to engage in contract negotiations for the management and processing for the City's organics material streams with the private sector. While the outcome of any potential interest in

managing processing is uncertain at this time, approval to move ahead with community-wide collection would ensure adequate time for negotiations with the private sector for organics material management.

Administration will continue collecting organics from pilot routes, engaging with pilot participants, and measuring pilot program performance through September 2022. Should Council approve implementing a community-wide program, organic waste collection from pilot participants would continue through to the implementation of the community-wide program.

Bylaw Amendments

Staff have drafted Solid Waste and Recyclables Amendment Bylaw No. 40-68, 2022 (Attachment “C”), which includes the following:

- new definitions
- authorizing services
- adding clauses to support separation of organics from garbage and ensuring that organics containers are properly used (i.e. not contaminated), removing clauses that prohibit disposal of specific items in garbage or require specific handling of items in garbage that can be placed in organics containers (grass clippings, kitchen scraps)
- adding a utility fee for organics carts
- Adding a fee for larger- sized (360 L) recycling carts
- increasing the utility fee for larger sized garbage containers

Proposed Changes in Solid Waste Bylaw 40-67

Section 2.3(a) requires single-family and duplex dwellings to use the City’s automated collection service for removing garbage and recyclables. The proposed amendment would add the term “organics” to this section, thus requiring all single-family and duplex dwellings to use the City’s automated collection service for the removal of organics as well as garbage and recyclables.

Section 2.4(a) and (b)(iii) allows property owners and occupiers of multi-family dwellings and commercial premises to use the City’s automated collection service for the removal of garbage and recyclables. The proposed amendment would allow multi-family dwellings on the City’s curbside program to be serviced with organic waste collection but not allow commercial premises to be serviced with organics collection. The CleanBC grant agreement stipulates that the funding is solely for residential collection.

Section 3.2 allows the City to suspend collection under certain conditions. The proposed amendment to this section would allow the City to suspend collection if a resident places items other than organics in an organics container. The bylaw has a similar clause for recyclables, which is used on a regular basis during container inspections to help reduce contamination.

Section 3.3(a) includes provisions for what is not accepted in solid waste carts. The proposed amendments remove grass clippings from the list of prohibited items as these would be accepted in organics carts.

Section 3.3(b) includes provisions for requiring specific waste items be bagged in garbage. The proposed amendments remove kitchen and food waste, sawdust, and tissues from this clause as these would be accepted in organics carts.

Section 3.4(h) includes provisions that stipulate that solid waste carts are to be used exclusively for the storage of waste materials. The proposed amendment adds the term organics to types of waste that can be stored in carts.

Section 3.4(i) stipulates the frequency of collection for garbage and recyclables. The proposed amendment would change the frequency of collection of garbage and recyclables from once every week to once every two weeks and add organics collection every week.

Section 4.1(b) imposes utility fees for garbage and recyclables. The proposed amendments adds a utility fee for organics.

Schedule “A” includes fees for solid waste collection. The proposed amendment adds an annual \$12 fee for 120 L organics carts for residential and multi-family. While the focus is on single-family residential collection, there are several multi-family properties on the City’s curbside collection program which could be incorporated into the organics program.

The proposed amendment adds a new \$20 annual fee for 360 L recycling carts to provide a larger cart option for residents who need additional capacity for recycling. As per the City’s agreement with Recycle BC, residents can also place excess recycling at the curb beside their cart in a tote or cardboard box at no extra cost.

The proposed amendment to Schedule “A” also includes increasing the annual fee for 360 L garbage carts from \$230 to \$300. This increase is to incentivize separation of organics and recyclables from the garbage.

The proposed amendments in Municipal Ticket Information (MTI) Amendment Bylaw No. 43-17, 2022 (Attachment “D”), include adding offences and associated penalties for:

- failure to properly separate or dispose organics
- failure to properly store wildlife attractants

Schedule “Q” of the MTI Bylaw includes offences and penalties for the Solid Waste Bylaw. The proposed amendments to the MTI Bylaw include adding offences and associated penalties for failure to properly separate or dispose of organics. Based on lessons from the City’s recycling program, this penalty is required to allow enforcement for contaminating organics carts.

The proposed amendments to the MTI Bylaw also include adding an offence and associated penalties for failure to properly store wildlife attractants. This provision is needed to support maintaining the City’s good standing as a Bear Smart community.

ALTERNATIVES/OPTIONS

Opt Out of Organics Collection

Through public consultation and engagement with pilot participants, Administration received inquiries related to the option to opt out of organics collection. Residents who currently manage organics on their own (e.g. backyard composting, private collection, and feeding to livestock) have asked whether there would be an option to opt out of organics collection service. Through research into communities with organics collection, Administration found that an opt-out option for organics collection is not common practice due to the following:

- opt-out programs increase the user fees for those who choose to use the service
- there is an increase in the administrative costs for the collection service due to the increase in resources required to effectively manage an opt-out option

For example, the Town of Gibsons allows residents to opt-out of organics collection; however, residents must submit annual applications to opt out of the service and must prove that they divert 100% of materials accepted in the program. Based on conversations with staff from the Town of Gibsons, only 3% of residents currently qualify for the opt-out program, which is time consuming and costly to administer.

When done properly, backyard composting is an excellent way to manage household waste and reduces the need for collection and processing by the City or others. However, there are certain types of organics materials, such as meat, dairy, and cooked foods, that should not be composted in open backyard systems because they attract vermin, bears, and other wildlife. Other types of organics materials are not commonly composted in backyards, such as napkins, paper towels, paper plates, and pizza boxes, but would be accepted as part of a City collection program.

Based on the above, Administration does not recommend the inclusion of an opt-out option for the proposed community-wide collection program. As with curbside recycling, all residents would be required to pay for this new community service.

Collection Frequency

Since implementing the pilot program, several residents have raised concerns about the alternating, biweekly garbage and recycling collection schedule. The rationale for testing this model was based on research into other jurisdictions with organics programs in which biweekly collection of garbage and recycling is very common as it provides incentive to divert material from garbage to the organics stream (as garbage is collected on a less frequent basis) and minimizes collection costs.

Pilot participants were questioned about the level of concern and impact of the biweekly collection schedule in the two engagement surveys completed to date. The following table shows the results of the survey questions around collection frequency.

Stream	Survey 1 - Level of Concern	Survey 2 - Level of Impact
Biweekly garbage	21% Very concerned 23% Somewhat concerned 55% Not concerned 2% Not sure	23% Significant impact 35% Moderate impact 42% No impact
Biweekly recycling	24% Very concerned 26% Somewhat concerned 49% Not concerned 1% Not sure	28% Significant impact 34% Moderate impact 38% No impact

During the pilot, residents can place (a reasonable amount of) excess material at the curb on collection day. Collection staff track the number of homes with excess material placed out for collection. On average, the number of homes with excess garbage placed out for collection was 15 each day while the number of homes with excess recyclables placed out for collection was 13 each day. There are approximately 455 homes on each pilot route, which equates to an approximate average of 3% of households putting excess material out for collection on any given day.

Given the impacts to some residents, the following options around frequency of collection are alternatives to the proposed collection model:

- Option 1 - Weekly Collection of Garbage, Recycling, and Organics

This would be the most expensive option for residents as ongoing operational costs would increase through need for additional trucks and staff to operate those trucks. This option would be the least disruptive to residents, and those who do not wish to participate would be able to continue using their garbage bins without impact.

- Option 2 - Weekly Garbage and Recycling and Biweekly Organics

This option would have a higher cost impact as it would require expanding the fleet to accommodate an extra commodity picked up every two weeks. There is also potential negative impact with respect to odour and wildlife. Organics material sitting at a property for two weeks in hot temperatures would cause unpleasant odours that would attract wildlife.

- Option 3 - Weekly Recycling and Organics and Biweekly Garbage

This option would have a higher cost impact as it would require expanding the fleet to accommodate an extra commodity picked up every two weeks. This option would result in the highest waste diversion as recycling and organics collected every week and garbage collection every two weeks would be an incentive to separate organics from garbage to manage with the reduction in collection.

- Option 4 - Biweekly Garbage and Recycling and Seasonal Weekly and Biweekly Organics

This is a system that the City of Calgary has adopted knowing that the wildlife and odour impacts are not as significant an issue in the winter months as well as volumes of organics significantly reduce with less yard waste in winter. This would be the lowest cost option but would require more operational and fleet planning to manage the change in service levels over the year.

Collection Scheduling (Add-a-Day Collection Schedule)

The City's current collection schedule does not include curbside residential collection on statutory and municipal holidays. Instead, the collection schedule pauses one day on each holiday (commonly referred to as "add-a-day" scheduling). This approach to collection scheduling has always had an impact on operations with up to three days worth of garbage and recyclables that accumulate over the add-a-day schedule. Over the Christmas and Easter holidays, with two consecutive days of delayed collection, there is even more of an impact on operations due to the increase in material placed at the curb.

Through the pilot program, staff identified that the operational impacts of the add-a-day scheduling is compounded with the change to alternating biweekly collection of garbage and recyclables. In some cases over the Christmas holidays, some pilot routes did not receive garbage collection for 20 days.

Many jurisdictions collect residential solid waste on a four-day work week of ten-hour shifts, typically Tuesday through Friday, with waste being collected on stats that fall on Tuesdays and Fridays. Six of the 13 statutory holidays fall on Mondays. This approach to scheduling helps to mitigate the impacts to the level of service provided to residents due to stat and municipal holidays.

In the second pilot survey, residents were asked if they would support a shift to a set schedule for garbage collection, with 66% of respondents indicating that they support this shift if there is no extra cost, 13% indicating that they support this shift even if there is some extra cost, and 21% indicating they do not support this shift.

Based on the above, Administration recommends further exploring the option of implementing a revised collection schedule to minimize potential impacts of statutory and municipal holidays to residents as it relates to the collection of garbage and recyclables.

City-Supplied Organics Bin Liners

Kitchen bin liners aid in minimizing mess and preventing materials from freezing inside of carts in winter. The absence of viable kitchen bin liner options can be a barrier to increased participation and capture rates; however, bin liners do have a cost associated with their purchase. As part of the implementation of a community wide organics collection program, one option is for the City to purchase and deliver a six-month supply of bin liners to residents as they become accustomed to the new program. The cost for this option is a one-time capital expense of approximately \$120,000, which could be funded by the Solid Waste Reserve and would result

in no impact to user fees. Administration recommends the option of supplying an initial supply of bin liners to residents but not supplying bin liners on an ongoing basis.

Cart Washing Truck

One of the concerns we have heard throughout the pilot is related to the smell and yuck factor of the organics collection cart. Administration has reviewed the ability to wash carts and provide a more aesthetically pleasing experience for organics collection. Through the research, it appeared all communities put this task onto the resident rather than providing it systematically across the community.

Administration recommends further exploring the concept of washing organics carts on a regular schedule. More research is needed to determine the best approach in providing this new service.

Wildlife Management

During the feasibility study and the pilot program, staff heard from residents of their concerns that introducing curbside organics collection could lead to an increase in wildlife challenges, in particular rats and bears. Administration understands that bear-resistant carts, if used appropriately, can reduce the potential for bear-human conflicts and other unwanted wildlife interactions in residential neighbourhoods. It is the responsibility of residents to ensure that waste is managed in such a way to minimize wildlife attractants; however, there is a desire for bear-resistant cart options in some areas.

Administration does not recommend that wildlife-resistant carts be implemented at this time. Staff will continue to research options for introducing bear-resistant carts into the City's solid waste collection system. In the meantime, City staff will continue to provide education and awareness to the public regarding the various wildlife that we share the land with and the various actions we can take to prevent unwanted wildlife interactions so we can keep both our residents and wildlife safe.

FINANCIAL IMPLICATIONS

Costs and Funding

City-Wide Implementation

The estimated capital cost for Phase 3 (community-wide implementation) presented to Council in December 2020 was \$3,510,000. This cost has since been revised to an estimated value of \$4,008,633—an increase of \$498,633. In December 2020, Council authorized staff to pursue grant funding from the CleanBC Organics Infrastructure and Collection Program, with the City receiving funding in the amount of \$1,788,233 in August 2021. As part of the grant funding application process, the City was required to commit funds from the Solid Waste Reserve in the amount of one-third of all eligible program costs, which equated to \$1,020,000. This City funding was approved by Council at the December 15, 2020 Regular Council Meeting. Based on the revised total capital cost estimate (\$4,008,633), the CleanBC grant funds (\$1,788,233) and the initially approved City funding (\$1,020,000), staff are now requesting that the Civic Operations Committee recommend to Council that the remaining capital funding (\$1,200,400) be funded

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from the Solid Waste Reserve. The total capital cost of this program needed from the Solid Waste Reserve is \$2,220,400.

Capital Expenses

This additional capital request of \$1,200,400 will fund the addition of three new solid waste trucks. These trucks are requested based on community growth and provincial regulation of separating commercial properties from residential properties.

Operating Expenses

The following table represents the new annual operating costs associated with deploying an effective solid waste collection program.

Budget Item	Amount
Solid Waste Operator and Truck	\$200,000
Solid Waste Operator and Truck	\$200,000
Solid Waste Reduction Coordinator and Vehicle	\$100,000
Solid Waste Analyst and Vehicle	\$100,000
Increase in Annual Operating Costs	\$600,000

It is anticipated that the organics processing cost would be in the range of \$70 to \$150 per metric tonne, which will be absorbed by the reduction of landfill tipping fees (i.e. solid waste collection would no longer pay tipping fees for the organics now being diverted from the landfill).

These new operating costs will be funded by creating a specific organics service charge and increasing the largest garbage container (360 L). Because the exact organics processing costs are still being determined, the new annual organics collection fee will end up being between \$11 and \$18, and the largest garbage container will be adjusted from \$230 per year to \$300 per year. The attached bylaw shows a draft annual rate of \$12. This rate may be adjusted before the bylaw goes before Council for first reading.

PERSONNEL IMPLICATIONS

Administration is seeking Council's approval to add four new full-time equivalents (FTEs) within the Environmental Services Section and the Sanitation and Sign Shop Section to support operations and administration. Two FTEs would be for Solid Waste Operators within the Sanitation and Sign Shop Section, and two FTEs would be for a Solid Waste Reduction Coordinator and a Solid Waste Services Analyst to supplement the current position within the Environmental Services Section.

The rationale for the Solid Waste Operators was included in the discussion about fleet impacts above, specifically driven by growth, commercial waste, and contingency factors. With the addition of new trucks for the fleet, there is a need for operators of those trucks.

The need for new FTEs for a Solid Waste Reduction Coordinator and another Solid Waste Services Analyst is driven by the following factors:

- Meeting waste reduction targets - the Community Climate Action Plan has targets to reach zero waste and significantly reduce waste to landfill. Support is needed to help plan and drive initiatives to meet these targets.
- Monitoring and oversight - the Environmental Services Section lacks capacity to effectively oversee and administer several waste diversion programs. In particular, there is insufficient staff capacity to ensure the City's long-term compliance with the rigorous requirements of the contract with Recycle BC, which provides a significant source of revenue for the City. In addition, to ensure long-term success of the proposed curbside residential organic waste collection program, additional staff capacity is required.
- Education and behaviour change - there is an increasing need to support the community in reducing and diverting waste through education and outreach to meet City waste reduction targets.

SUSTAINABILITY IMPLICATIONS

The main drivers for this program are related to sustainability. Removing organic waste from a landfill reduces greenhouse gas emissions. According to the Community Climate Action Plan GHG inventory, 5% of the community's GHGs are related to solid waste and specifically methane gas released from organics material breaking down in the landfill. Diverting organics material to composting can reduce our community's GHG emissions by an estimated 2,800 tCO₂e per year.

Diverting waste from landfill is another priority and benefit of organic waste collection. Estimates based on data collected during the pilot program show that a community-wide organics collection program could potentially divert approximately 6,000 tonnes of organic waste from landfill each year, reducing the amount of waste going to the Mission Flats Landfill by 10% and extending the life of the landfill by three years.

Food waste prevention strategies will be included in the community-wide program to encourage residents to reduce waste. The City has participated in the provincial Love Food Hate Waste program, and although we are no longer using this branding, the City continues to educate residents about food waste reduction strategies. A community-wide organics collection program would include a robust communications campaign, including City-branded information under the theme of "Love Your Food".

SOCIAL IMPLICATIONS

There are several social benefits for a curbside organics program, such as increased civic pride, ownership and participation as residents can contribute to waste diversion efforts, and pride in taking steps to reduce environmental impact. Curbside organic waste collection also improves the efficiency of services by making it easier for residents to participate in waste diversion. This program also supports increased employment opportunities and stimulus for the local economy through private enterprise opportunities with respect to processing organics material. If local processing is developed, there would be further opportunities for private haulers to expand their collection into organic waste.

IMPLEMENTATION PLAN

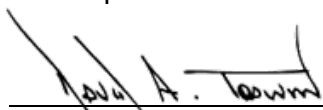
As outlined to Council previously, implementation of a community-wide organic waste collection program is still targeted for July 2023. Pending the Civic Operations Committee recommending Council's approval, the following key activities will be initiated:

Activity	Timing
Present Amended Solid Waste and MTI Bylaws for Adoption	May 2022
Secure Organics Processing Service Agreement	June 2022
Place Orders for Curbside Carts and Kitchen Bins	June 2022
Place Order for Additional Solid Waste Collection Trucks	June 2022
Develop and Implement Long-Term Public Education Strategy	April 2022–December 2024
Modify Collection Routes	April 2022–June 2022
Deliver Curbside Carts and Kitchen bins	April 2023
Begin Community-Wide Collection	July 2023

COMMUNICATIONS PLAN

Drawing from the lessons learned during Phase 2 - pilot program, staff from Environmental Services will collaborate with the Communications and Community Engagement Division to develop a robust communications strategy for the curbside residential organic waste collection program, including a comprehensive education campaign well in advance of community-wide collection.


J. Fretz, P.Eng.
Civic Operations Director


Approved for Committee

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Attachments